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PTO/SB/21 (09-04)

**TRANSMITTAL
FORM**

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission

Application Number	10/799,988
Filing Date	March 11, 2004
First Named Inventor	Taguchi, Yuichi
Art Unit	2161
Examiner Name	Unassigned
Attorney Docket Number	16869B-060600US

ENCLOSURES (Check all that apply)

<input checked="" type="checkbox"/> Fee Transmittal Form <input type="checkbox"/> Fee Attached <input type="checkbox"/> Amendment/Reply <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input type="checkbox"/> Information Disclosure Statement <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Reply to Missing Parts/ Incomplete Application <input type="checkbox"/> Reply to Missing Parts under 37 CFR 1.52 or 1.53	<input type="checkbox"/> Drawing(s) <input type="checkbox"/> Licensing-related Papers <input type="checkbox"/> Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund <input type="checkbox"/> CD, Number of CD(s) _____ <input type="checkbox"/> Landscape Table on CD	<input type="checkbox"/> After Allowance Communication to TC <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences <input type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input checked="" type="checkbox"/> Other Enclosure(s) (please identify below): Petition to Make Special for New Application Exhibit A, Table of Contents, and 9 Refs. Return Postcard
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Remarks	The Commissioner is authorized to charge any additional fees to Deposit Account 20-1430.
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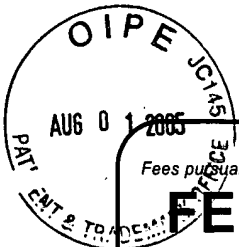
SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name	Townsend and Townsend and Crew LLP		
Signature			
Printed name	Rodney C. LeRoy for George B. F. Yee (Reg. No. 37,478)		
Date	July 29, 2005	Reg. No.	53,205

CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below.

Signature			
Typed or printed name	Cynthia McKinley	Date	July 29, 2005



Effective on 12/08/2004.

Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).

FEE TRANSMITTAL
For FY 2005☐ Applicant claims small entity status. See 37 CFR 1.27**TOTAL AMOUNT OF PAYMENT** (\$) 130**Complete if Known**

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Filing Date	March 11, 2004
First Named Inventor	Taguchi, Yuichi
Examiner Name	Unassigned
Art Unit	2161
Attorney Docket No.	16869B-060600US

METHOD OF PAYMENT (check all that apply)

☐ Check ☐ Credit Card ☐ Money Order ☐ None ☐ Other (please identify): _____
☒ Deposit Account Deposit Account Number: 20-1430 Deposit Account Name: Townsend and Townsend and Crew LLP

For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)

☒ Charge fee(s) indicated below ☐ Charge fee(s) indicated below, except for the filing fee
☒ Charge any additional fee(s) or underpayments of fee(s) under 37 CFR 1.16 and 1.17 ☒ Credit any overpayments

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038**FEE CALCULATION****1. BASIC FILING, SEARCH, AND EXAMINATION FEES**

Application Type	FILING FEES Small Entity		SEARCH FEES Small Entity		EXAMINATION FEES Small Entity		Fees Paid (\$)
	Fee (\$)	Fee (\$)	Fee (\$)	Fee (\$)	Fee (\$)	Fee (\$)	
Utility	300	150	500	250	200	100	
Design	200	100	100	50	130	65	
Plant	200	100	300	150	160	80	
Reissue	300	150	500	250	600	300	
Provisional	200	100	0	0	0	0	

2. EXCESS CLAIM FEES

Fee Description	Small Entity	
	Fee (\$)	Fee (\$)
Each claim over 20 or, for Reissues, each claim over 20 and more than in the original patent	50	25
Each independent claim over 3 or, for Reissues, each independent claim more than in the original patent	200	100
Multiple dependent claims	360	180

Total Claims	Extra Claims	Fee (\$)	Fee Paid (\$)	Multiple Dependent Claims	Fee (\$)	Fee Paid (\$)
_____ -20 or HP = _____ x _____ = _____						
HP = highest number of total claims paid for, if greater than 20						
Indep. Claims	Extra Claims	Fee (\$)	Fee Paid (\$)			
_____ -3 or HP = _____ x _____ = _____						
HP = highest number of independent claims paid for, if greater than 3						

3. APPLICATION SIZE FEE

If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

Total Sheets	Extra Sheets	Number of each additional 50 or fraction thereof	Fee (\$)	Fee Paid (\$)
_____ - 100 = _____ / 50 = _____ (round up to a whole number) x _____ = _____				

4. OTHER FEE(S)

Non-English Specification, \$130 fee (no small entity discount)

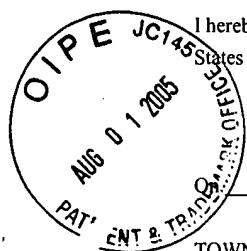
Other: Petition Fee

Fees Paid (\$)

130

SUBMITTED BY

Signature		Registration No. (Attorney/Agent) 53,205	Telephone 650-326-2400
Name (Print/Type)	Rodney C. LeRoy for George B. F. Yee	(Reg. No. 37,478)	Date July 29, 2005



I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to:

PATENT
Attorney Docket No.: 16869B-060600US
Client Ref. No.: HAL-ID 232
Hitachi Ref. No.: 340300529US1

7/29/05

TOWNSEND and TOWNSEND and CREW LLP

By: 

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Yuichi Taguchi et al.

Application No.: 10/799,988

Filed: March 11, 2004

For: Method and Apparatus for Storage
Network Management

Customer No.: 20350

Confirmation No. 8793

Examiner: Unassigned

Technology Center/Art Unit: 2161

PETITION TO MAKE SPECIAL FOR
NEW APPLICATION PURSUANT TO
37 C.F.R. § 1.102(d) &
M.P.E.P. § 708.02, Item VIII,
ACCELERATED EXAMINATION

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Submitted herewith is a petition to make special the above-identified application in accordance with MPEP § 708.02, Item VIII, accelerated examination. The application has not received any examination by the Examiner.

(A) The Commissioner is authorized to charge the petition fee of \$130 under 37 C.F.R. § 1.17(h), and any additional fees that may be associated with this petition may be charged to Deposit Account No. 20-1430.

(B) All the claims are believed to be directed to a single invention. If the examiner determines that all the claims presented are not obviously directed to a single invention, then Applicant will make an election without traverse as a prerequisite to the grant of special status where the specific grouping of claims will be determined by the examiner.

(C) A pre-examination search was performed by an independent patent search firm. The pre-examination search includes a classification search, a computer database search, and a keyword search. The classification search covered the following classes and subclasses:

Class	Subclass
707	1, 10, 102
709	203, 222, 223, 225, 237-240, 249
710	8, 15, 38
711	3, 4, 6, 111, 112, 154
714	763

Additionally, a keyword search was performed on the USPTO full-text database, including published applications. The following references were identified in the search report:

(1) U.S. Patent Nos.:

US 5,802,547	Legvold
US 6,253,240	Axberg et al
US 6,393,535	Burton et al
US 6,601,128	Burton et al
US 6,640,278	Nolan et al
US 6,665,714	Blumenau et al

(2) U.S. Patent Application Publication Nos.:

US 2002/0143999	Yamagami
US 2002/0156914	Lo et al
US 2003/0005119	Mercier et al

(D) The above references are enclosed herewith, collectively as Exhibit A.

(E) Set forth below is a detailed discussion of the references, pointing out with particularity how the claimed subject matter recited in the claims, amended according to the preliminary amendment filed herewith, is distinguishable over the references.

Claimed Subject Matter of the Present Invention

There are six independent claims among the 27 claims that are pending in the instant application.

Independent **claim 1** is directed to a method in a networked data processing system including receiving a request for data storage, the request including a service policy containing one or more data storage performance criteria. A data store is identified from among a pool of data stores defined in a data storage component. A port on the data store is identified by applying a rule to the one or more data storage performance criteria. Communication with a data storage agent is made to establish a data path between the port and the data store, the data storage agent being one of a plurality of data storage agents that manage portions of the data storage component. A network path is identified between the port and a host server that is identified in the request. A communication is made with a network agent to allocate the network path, the network agent being one of a plurality of network agents that manage portions of the network storage component.

Independent **claim 6** is directed to software for performing the steps of claim 1.

Independent **claim 9** is directed to a method in a networked data processing system including receiving a request for data storage, the request including a service policy containing one or more data storage performance criteria and one or more security criteria. A data store is identified from among a pool of data stores defined in a data storage component based on a first rule comprising an evaluation of the one or more data storage performance criteria. Communication with a data storage agent is made to establish a data path between the data store and a port on the data store, the data storage agent being one of a plurality of data storage agents that manage portions of the data storage component. A network path is identified between the port and a host server that is identified in the request based on a second rule comprising an evaluation of the one the one or more security criteria. A communication is made with a network agent to allocate the network path, the network agent being one of a plurality of network agents that manage portions of the network storage component.

Independent **claim 13** is directed to software for performing the steps of claim 9.

Independent **claim 19** is directed to a method in a networked data processing system including receiving a request for data storage, the request including a service policy containing one or more security criteria. A data store is identified from among a pool of data stores defined in a data storage component based on some of the one or more security criteria. Communication with a data storage agent is made to allocate the data store. Based on some of the one or more security criteria, a network path between a host server and the data store is identified, the host server being identified in the request.

Independent **claim 24** is directed to software for performing the steps of claim 19.

U.S. Patent No. 5,802,547 Legvold

The patent to Legvold discloses a data storage system that establishes streamlined data exchange paths between stored data and multiple system hosts, decreasing contention among the hosts and expediting host access to the data. First, one or more storage directors receive an initial host request to access a data block contained in part of a shared data resource. This part of the shared data resource may comprise a magnetic disk drive device, part of a physical device, a logical volume, a logical device or another data group. In response, the storage director performs a predetermined series of initial access steps to facilitate the data transfer. For example, the data block is copied from the shared data resource into a cache, if not already present therein. Then, a data path is formed between the host and the device containing the data block. Next, a fast path map is updated to indicate establishment of the data path between the host and the device containing the data block. The data block is subsequently exchanged between the cache and the host. When the storage director receives a subsequent request by the same host to access the same device, the storage director consults the fast path map and determines that a data path already exists between the host and the device. Accordingly, the requested data is exchanged between the host and the cache utilizing the previously established data path between the host and the device, avoiding many steps initially required to establish the data path. The invention affords its users with a number of distinct advantages. First, after a host initially accesses data stored in a data storage device of the invention, subsequent accesses by that host to the device are expedited since the data path has

already been established. This faster access therefore helps reduce stalls and other conflicts among hosts competing for access to data. Furthermore, the invention provides an expedited data path while still retaining full error processing and busy-data processing. The invention may also take advantage of highly granular data locks, to avoid thrashing and other contention problems between competing hosts. (See, e.g., Abstract and column 2, lines 19-31).

As to method **claim 1** and its corresponding software-directed **claim 6**, the reference does not teach or suggest receiving a request for data storage where the request includes a service policy containing one or more data storage performance criteria. The reference does not show or suggest identifying a port on a data store (from a pool of data stores in a data storage component) based on the one or more data storage performance criteria. The reference does not show or suggest communicating with a data storage agent to establish a data path between the port and the data store, the data storage agent being one of a plurality of data storage agents that manage portions of the data storage component. The reference does not show or suggest that a network path is identified between the port and a host server that is identified in the request, or that a communication is made with a network agent to allocate the network path where the network agent is one of a plurality of network agents that manage portions of the network storage component.

As to method **claim 9** and its corresponding software-directed **claim 13**, the reference does not teach or suggest receiving a request for data storage where the request includes a service policy containing one or more data storage performance criteria and one or more security criteria. The reference does not show or suggest that a data store is identified from among a pool of data stores defined in a data storage component based on a first rule comprising an evaluation of the one or more data storage performance criteria. The reference does not show or suggest communicating with a data storage agent to establish a data path between the data store and a port on the data store where the data storage agent is one of a plurality of data storage agents that manage portions of the data storage component. The reference does not show or suggest that a network path is identified between the port and a host server that is identified in the request based on a second rule comprising an evaluation of the one the one or more security criteria, or that a communication is made with a network agent to allocate the network path, the

network agent being one of a plurality of network agents that manage portions of the network storage component.

As to method **claim 19** and its corresponding software-directed **claim 24**, the reference does not teach or suggest receiving a request for data storage where the request includes a service policy containing one or more security criteria. The reference does not show or suggest that a data store is identified from among a pool of data stores defined in a data storage component based on some of the one or more security criteria, or that a communication with a data storage agent is made to allocate the data store. The reference does not show or suggest that, based on some of the one or more security criteria, a network path between a host server and the data store is identified, the host server being identified in the request.

U.S. Patent No. 6,253,240 Axberg et al

The patent to Axberg et al. discloses a distributed storage management program that manages a network comprising multiple data storage devices attached to multiple host computer systems. The management program includes a separate agent in each host, and a central manager. The agents gather data and communicate with the manager across a communications path which is independent of the storage network. The manager collates the data from different agents to produce a coherent view of the network. Preferably, each local agent actively builds an internal topological view of the network as seen by its host and collects data such as error events, which it stores in internal data structures. The manager is able to resolve gaps in the information of each agent from information provided by other agents. Preferably, the manager represents the network as a collection of objects of different classes in an object-oriented class library. This collection is graphically displayed in a logical and understandable manner to a user on a display device. The agent operates as a server, responding to data requests from the central manager. The local agent is not a mere passive entity responding only to data requests, but actively builds an internal topological view of the network as seen by its host and collects data such as error events. This view is stored in a complex series of data structures which permit rapid access to individual device data, as well as to topological data, for use in responding to a variety of information requests from the central manager. The

local agent contains intelligent resolution routines for resolving certain unknown devices in its topological view of the networks attached to its host. (See, e.g., Abstract and column 3, lines 14-26).

As to method **claim 1** and its corresponding software-directed **claim 6**, the reference does not teach or suggest receiving a request for data storage where the request includes a service policy containing one or more data storage performance criteria. The reference does not show or suggest identifying a port on a data store (from a pool of data stores in a data storage component) based on the one or more data storage performance criteria. The reference does not show or suggest communicating with a data storage agent to establish a data path between the port and the data store, the data storage agent being one of a plurality of data storage agents that manage portions of the data storage component. The reference does not show or suggest that a network path is identified between the port and a host server that is identified in the request, or that a communication is made with a network agent to allocate the network path where the network agent is one of a plurality of network agents that manage portions of the network storage component.

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U.S. Patent No. 6,393,535 Burton et al

The patent to Burton et al. discloses a method, system, program, and data structure for defining paths for a computer to use to send commands to execute with respect to storage regions in a storage device that are accessible through at least two controllers. For each storage region, one controller is designated as a preferred controller and another as a non-preferred controller. The computer initially sends a command to be executed with respect to a target storage region to the preferred controller for the target storage region and sends the command to the non-preferred controller for the target storage region if the preferred controller cannot execute the command against the target storage region. In response to the non-preferred controller receiving at least one command for the target storage region, the designation is modified to make a current preferred controller the non-preferred controller for the target storage region and a current non-preferred controller the preferred controller for the target storage region. To address this problem associated with a preferred path designation, preferred embodiments provide a mechanism for altering the preferred controller designation for a storage region if the hosts are tending to send commands for the storage region to the non-preferred controller. After switching the preferred controller designation, the controller will receive the commands as the preferred controller, where previously the controller was receiving the commands as the non-preferred controller. Once the controller is designated as the preferred controller, the controller can execute the commands against the storage region without communicating and coordinating with the other controller, thereby avoiding the performance

degradation that necessarily results from such coordination activities. (See, e.g., Abstract and column 3, lines 18-31).

As to method **claim 1** and its corresponding software-directed **claim 6**, the reference does not teach or suggest receiving a request for data storage where the request includes a service policy containing one or more data storage performance criteria. The reference does not show or suggest identifying a port on a data store (from a pool of data stores in a data storage component) based on the one or more data storage performance criteria. The reference does not show or suggest communicating with a data storage agent to establish a data path between the port and the data store, the data storage agent being one of a plurality of data storage agents that manage portions of the data storage component. The reference does not show or suggest that a network path is identified between the port and a host server that is identified in the request, or that a communication is made with a network agent to allocate the network path where the network agent is one of a plurality of network agents that manage portions of the network storage component.

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U.S. Patent No. 6,601,128 Burton et al

The patent to Burton et al. discloses a method, system, program, and data structure for selecting a path to one of at least two controllers. Each controller is capable of providing access to storage areas, such as Logical Unit Numbers (LUNs). Path information is received from the controllers indicating a preferred controller to use to access each storage area. An input/output (I/O) command directed to a target storage area is processed and the I/O command is directed to the controller indicated in the path information as the preferred controller for the target storage area. The controller receiving the I/O command executes the I/O command against the target storage area. The path information to the storage controllers providing access to the storage areas is encoded with information designating one controller as the preferred controller and another as a non-preferred controller. The encoded path information is returned to a requesting computer. The requesting computer initially sends an input/output (I/O) command to the preferred controller and sends the I/O command to the non-preferred controller if the preferred controller cannot execute the I/O command. Preferred embodiments optimize I/O processing by using a preferred path to access the LUN selected according to load balancing optimization, and at the same time provide a mechanism for an alternative failback controller and path in the event there is a failure at any point in the path. (See, e.g., Abstract and column 6, lines 38-54).

As to method **claim 1** and its corresponding software-directed **claim 6**, the reference does not teach or suggest receiving a request for data storage where the request

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U.S. Patent No. 6,640,278 Nolan et al

The patent to Nolan et al. discloses a storage domain management system that supports storage domains. The storage server includes a plurality of communication interfaces. A first set of communication interfaces in the plurality is adapted for connection to all kinds of users of data. A second set of communication interfaces in the plurality is adapted for connection to respective devices in a pool of storage devices for use in a storage domain. Data processing resources in the server are coupled to the plurality of communication interfaces for transferring data among the interfaces. The data processing resources comprise a plurality of driver modules and configurable logic linking driver modules into data paths. Each configured data path acts as a virtual circuit that includes a set of driver modules selected from the plurality of driver modules. A data storage transaction which is received at a communication interface is mapped to one of the configured data paths. A display and a user input device are included with data processing structures to manage images displayed on the display. A storage server is supported by an operating system that is designed to support the uniquely high bandwidth, high throughput, and demands of a storage server. In a preferred embodiment, the resources within storage domains are defined using virtual circuits which comprise a plurality of driver modules and configurable logic linking driver modules into data paths, which are implemented in pairs for redundancy in a preferred system. Each configured data path acts as a virtual circuit that includes a set of driver modules selected from the plurality of driver modules. A data storage transaction which is received at a communication interface is mapped to one of the configured data paths, and thereby controlled within a storage domain managed and configured in the storage domain manager. The operating system schedules and controls data transfers over the bus systems and manages the system. (See, e.g., Abstract, column 3, lines 1-11, and column 12, line 66-column 13, line 6).

As to method **claim 1** and its corresponding software-directed **claim 6**, the reference does not teach or suggest receiving a request for data storage where the request includes a service policy containing one or more data storage performance criteria. The reference does not show or suggest identifying a port on a data store (from a pool of data stores in a data storage component) based on the one or more data storage performance criteria. The reference does not show or suggest communicating with a data storage agent to establish a data path between the port and the data store, the data storage agent being one of a plurality of data storage agents that manage portions of the data storage component. The reference does not show or suggest that a network path is identified between the port and a host server that is identified in the request, or that a communication is made with a network agent to allocate the network path where the network agent is one of a plurality of network agents that manage portions of the network storage component.

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or suggest that a data store is identified from among a pool of data stores defined in a data storage component based on some of the one or more security criteria, or that a communication with a data storage agent is made to allocate the data store. The reference does not show or suggest that, based on some of the one or more security criteria, a network path between a host server and the data store is identified, the host server being identified in the request.

U.S. Patent No. 6,665,714 Blumenau et al

The patent to Blumenau et al. discloses a method and apparatus for managing the availability and assignment of data in a storage system that is coupled to a network. A user interface is provided that executes on a host processor that is coupled to the storage system over the network. The user interface communicates with a configuration database in the storage system to identify host processors that are logged into the storage system over the network, to identify storage volumes on the storage system, to identify whether access to a particular storage volume on the storage system is permitted from a particular host processor, and to identify a network path by which host processors are logged into the storage system over the network. In one embodiment, a graphical user interface is provided that can be used to graphically represent host processors, host bus adapters, storage systems, and storage system adapters and storage volumes on the storage system. The graphical representation provided by the graphical user interface permits a user to graphically view a topology of the network at varying levels of detail, selectable by the user. The graphical user interface also permits a user to allow or deny access to storage systems or a particular storage volume on storage system from one or more of the host processors, host bus adapters, etc., by selecting and manipulating graphical representations thereof. In another embodiment, a command line user interface is provided with similar functionality. One can view which host processors can communicate with a storage system, the path or physical connection by which they communicate, which storage volumes of data are accessible to a particular host processor or are shared among a number of host processors, etc. In addition, the user interface can be used to modify the configuration of devices in the network, as well as manage access to storage volumes. (See, e.g., Abstract and column 24, lines 4-23).

As to method **claim 1** and its corresponding software-directed **claim 6**, the reference does not teach or suggest receiving a request for data storage where the request includes a service policy containing one or more data storage performance criteria. The reference does not show or suggest identifying a port on a data store (from a pool of data stores in a data storage component) based on the one or more data storage performance criteria. The reference does not show or suggest communicating with a data storage agent to establish a data path between the port and the data store, the data storage agent being one of a plurality of data storage agents that manage portions of the data storage component. The reference does not show or suggest that a network path is identified between the port and a host server that is identified in the request, or that a communication is made with a network agent to allocate the network path where the network agent is one of a plurality of network agents that manage portions of the network storage component.

As to method **claim 9** and its corresponding software-directed **claim 13**, the reference does not teach or suggest receiving a request for data storage where the request includes a service policy containing one or more data storage performance criteria and one or more security criteria. The reference does not show or suggest that a data store is identified from among a pool of data stores defined in a data storage component based on a first rule comprising an evaluation of the one or more data storage performance criteria. The reference does not show or suggest communicating with a data storage agent to establish a data path between the data store and a port on the data store where the data storage agent is one of a plurality of data storage agents that manage portions of the data storage component. The reference does not show or suggest that a network path is identified between the port and a host server that is identified in the request based on a second rule comprising an evaluation of the one the one or more security criteria, or that a communication is made with a network agent to allocate the network path, the network agent being one of a plurality of network agents that manage portions of the network storage component.

As to method **claim 19** and its corresponding software-directed **claim 24**, the reference does not teach or suggest receiving a request for data storage where the request includes a service policy containing one or more security criteria. The reference does not show

or suggest that a data store is identified from among a pool of data stores defined in a data storage component based on some of the one or more security criteria, or that a communication with a data storage agent is made to allocate the data store. The reference does not show or suggest that, based on some of the one or more security criteria, a network path between a host server and the data store is identified, the host server being identified in the request.

U.S. Application Publication No. 2002/0143999 Yamagami

The published patent application of Yamagami discloses techniques for managing data flow over a plurality of connections between primary and remote storage devices. In a representative example embodiment, when the primary storage system copies data to the secondary storage system, it chooses one of a plurality of networks connecting it to the secondary storage system, depending upon a users' policy. Since networks have different characteristics, in terms of, for example, performance, security, reliability, and costs, the user can specify which network(s) are used under various circumstances, i.e., daytime operation, nighttime operation, normal operation, emergency, and so forth. The storage systems comprise a mapping of volumes and ports. When performing copy operations, the primary storage system finds a volume storing the data, and available ports by accessing the mapping. The mappings are based upon policies that are input by a user. Each of the plurality of networks has one or more of user provided policies associated with it. In one specific embodiment, the method also comprises associating the plurality of networks with a plurality of path groups and then associating the one or more policies based upon the one or more path groups. (See, e.g., Abstract and paragraph 12).

As to method **claim 1** and its corresponding software-directed **claim 6**, the reference does not teach or suggest receiving a request for data storage where the request includes a service policy containing one or more data storage performance criteria. The reference does not show or suggest identifying a port on a data store (from a pool of data stores in a data storage component) based on the one or more data storage performance criteria. The reference does not show or suggest communicating with a data storage agent to establish a data path between the port and the data store, the data storage agent being one of a plurality of data

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U.S. Application Publication No. 2002/0156914 Lo et al

The published patent application of Lo et al. discloses a controller for managing bandwidth in a communications. The controller includes a service controller, a service interface to a service network element, and a facility interface to a transport network element. The controller works at three levels to optimize network resources. At the packet layer, the controller automatically sets up end-to-end MPLS paths, and dynamically balances the utilization of the paths by adjusting the bandwidth allocation and traffic and distribution on the paths. Between the optical and packet layers, the controller works to allow optical resources to be used directly by the packet layer to respond to congestion or increased demand at the packet layer. The controller is a smart packet/optical inter-working controller that uses information from the packet and optical layers about the network topology and network wide policy information for reacting to changing bandwidth demands by making dynamic network configuration adjustments. Regarding the intra-layer functionality of the controllers 10, at the service node layer, each of the controllers 10 has information pertaining to the service level agreements (SLAs), by way of the policy information, and manages resources at this layer to meet the SLAs. (See. e.g., Abstract and paragraphs 23 and 32).

As to method **claim 1** and its corresponding software-directed **claim 6**, the reference does not teach or suggest receiving a request for data storage where the request includes a service policy containing one or more data storage performance criteria. The reference does not show or suggest identifying a port on a data store (from a pool of data stores in a data storage component) based on the one or more data storage performance criteria. The reference does not show or suggest communicating with a data storage agent to establish a data path between the port and the data store, the data storage agent being one of a plurality of data storage agents that manage portions of the data storage component. The reference does not show or suggest that a network path is identified between the port and a host server that is identified in the request, or that a communication is made with a network agent to allocate the network path where the network agent is one of a plurality of network agents that manage portions of the network storage component.

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U.S. Application Publication No. 2003/0005119 Mercier et al

The published patent application of Mercier et al. discloses a DataPath Engine coupled to a SAN that provides automated storage provisioning between an application on a Storage Area Network (SAN) attached server and a data volume on a SAN attached storage subsystem. The apparatus provides a simple user interface that allows operators to use pre-created policies for criteria to select data paths that meet organizations uptime and performance

requirements. The apparatus uses pathing methodologies to select the optimal data path from the candidates by rating SAN state, uptime, performance, and other key factors. This apparatus allows an enterprise to more efficiently and effectively manage and monitor large, complex, distributed SANs. The DataPath Engine calculates the optimal data path based upon the rules or policies specified and information learned about the SAN, including policies and rules defined in preconfigured templates for interaction with the DataPath Engine. (See, e.g., Abstract and paragraph 10).

As to method **claim 1** and its corresponding software-directed **claim 6**, the reference does not teach or suggest receiving a request for data storage where the request includes a service policy containing one or more data storage performance criteria. The reference does not show or suggest identifying a port on a data store (from a pool of data stores in a data storage component) based on the one or more data storage performance criteria. The reference does not show or suggest communicating with a data storage agent to establish a data path between the port and the data store, the data storage agent being one of a plurality of data storage agents that manage portions of the data storage component. The reference does not show or suggest that a network path is identified between the port and a host server that is identified in the request, or that a communication is made with a network agent to allocate the network path where the network agent is one of a plurality of network agents that manage portions of the network storage component.

As to method **claim 9** and its corresponding software-directed **claim 13**, the reference does not teach or suggest receiving a request for data storage where the request includes a service policy containing one or more data storage performance criteria and one or more security criteria. The reference does not show or suggest that a data store is identified from among a pool of data stores defined in a data storage component based on a first rule comprising an evaluation of the one or more data storage performance criteria. The reference does not show or suggest communicating with a data storage agent to establish a data path between the data store and a port on the data store where the data storage agent is one of a plurality of data storage agents that manage portions of the data storage component. The reference does not show or suggest that a network path is identified between the port and a host server that is identified in

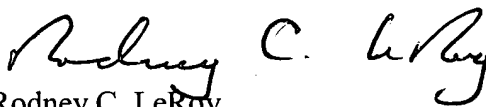
the request based on a second rule comprising an evaluation of the one the one or more security criteria, or that a communication is made with a network agent to allocate the network path, the network agent being one of a plurality of network agents that manage portions of the network storage component.

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Conclusion

In view of this comments presented in the instant petition and the claim amendments presented in the accompanying preliminary amendment, the Examiner is respectfully requested to issue a first Office Action at an early date.

Respectfully submitted,


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GBFY
60549420 v1

Exhibit A

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